


ESSENTIAL CONSIDERATIONS IN CHRONIC PAIN MANAGEMENT

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| A CASE-BASED PROGRAMME

| **LEARNING OBJECTIVES**

- Understand the complexity of chronic pain
- Describe and implement multimodal pain management strategies
 - pharmacological and
 - non-pharmacological approaches
- Understand and apply the universal precautions in pain medicine for the management of moderate to severe chronic pain using opioids



PART 1: CHRONIC PAIN

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PAIN - IASP DEFINITION (1979)

‘an unpleasant sensory and emotional experience, associated with actual or potential damage or described in terms of such damage’

- Pain is a complex process
 - Pain involves thoughts and feelings
 - Whatever the experiencing person says it is
 - Exists whenever the experiencing person says it does
- All pain is real
 - Regardless of whether the biological cause is known

| CHRONIC PAIN

- Chronic pain is pain that continues beyond the usual time of healing (or expected time of recovery)
 - Arbitrarily defined as longer than 3 months¹
- Chronic pain often involves more complex psychological features with multiple aetiologies
- Physical and psychological symptoms
- Pain classified as
 - Nociceptive , neuropathic or mixed²

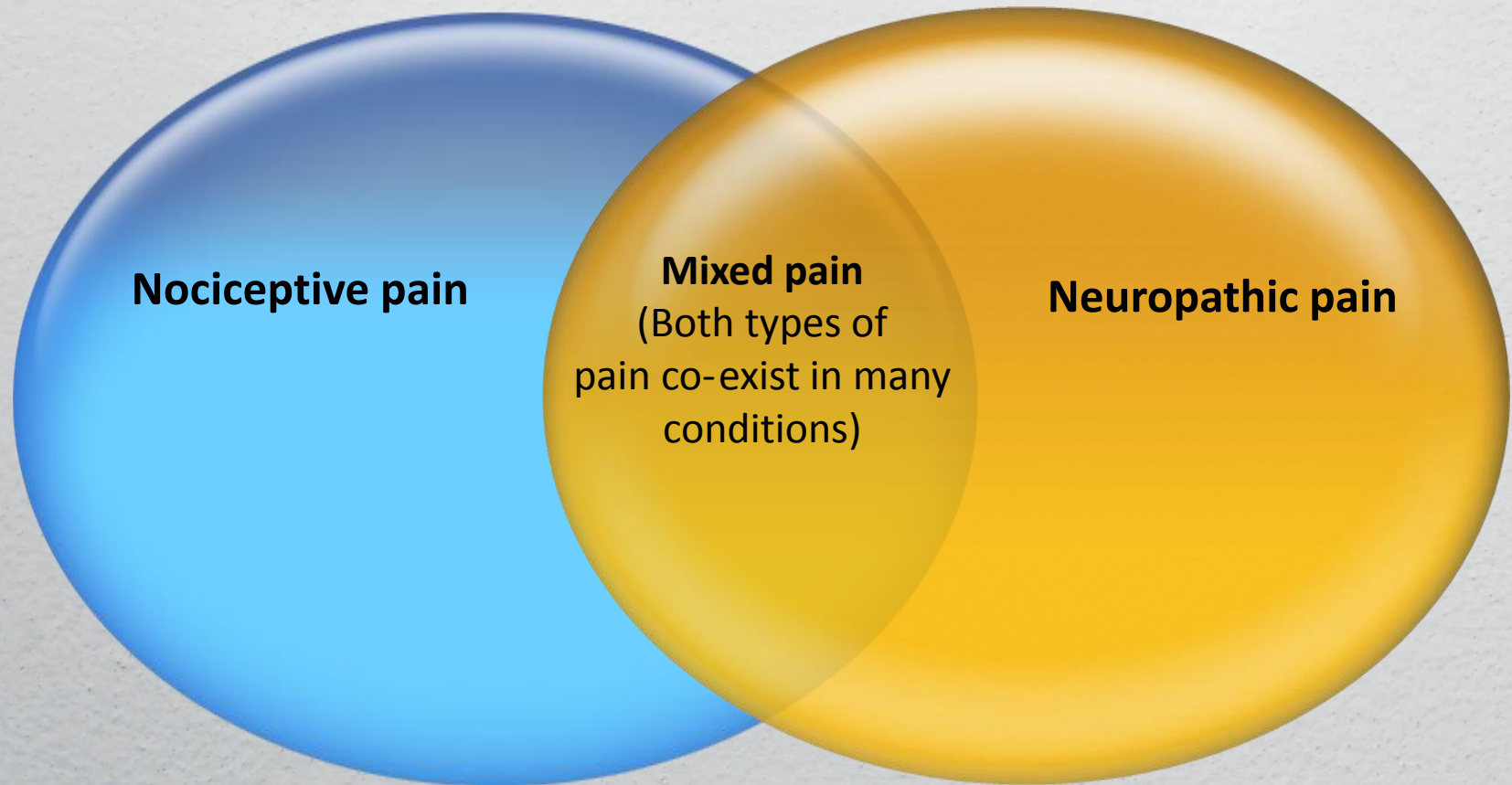
1. Analgesic Expert Group. Therapeutic Guidelines: Analgesic. Version 5. Melbourne: Therapeutic Guidelines Limited; 2007.

2. Goucke R. Med J Aust 2003;178:444–7.

| PREVALENCE

- In 2007, around 3.2 million Australians were estimated to experience chronic pain¹
- Pain and depression may co-exist in 30–50% of patients, with adverse effects on quality of life, disability and healthcare costs^{2,3}

TYPES OF PAIN



NOCICEPTIVE PAIN

- A sensory and emotional experience that occurs when specific peripheral sensory neurons (nociceptors) respond to noxious stimuli
- Painful region is typically localised at the site of injury
 - Throbbing, aching or stiffness
 - Aggravated by movement
- Usually time-limited and resolves when damaged tissue heals (e.g. bone fractures, burns and bruises)
- Can be chronic (e.g. osteoarthritis)
- Responds to conventional analgesics

| NEUROPATHIC PAIN

- Pain initiated or caused by a primary lesion or dysfunction in the peripheral or central nervous system (IASP definition)
- Pain arising as a direct consequence of a lesion or disease affecting the somatosensory system (NeuPSIG of IASP)
- Pain often described as shooting, electric shock-like, burning – commonly associated with tingling or numbness
- Pain occurs in the neurological territory of the affected structure (nerve, root, spinal cord, brain)
 - Typically distant from the site of injury
- Commonly a chronic condition
 - e.g. Post-herpetic neuralgia, post-stroke pain), but can occur with acute nerve injury (e.g. spinal cord injury, sciatica or surgery)
- Responds poorly to conventional analgesics

BURNING

CRAWLING

STABBING

SHOCKING

FREEZING



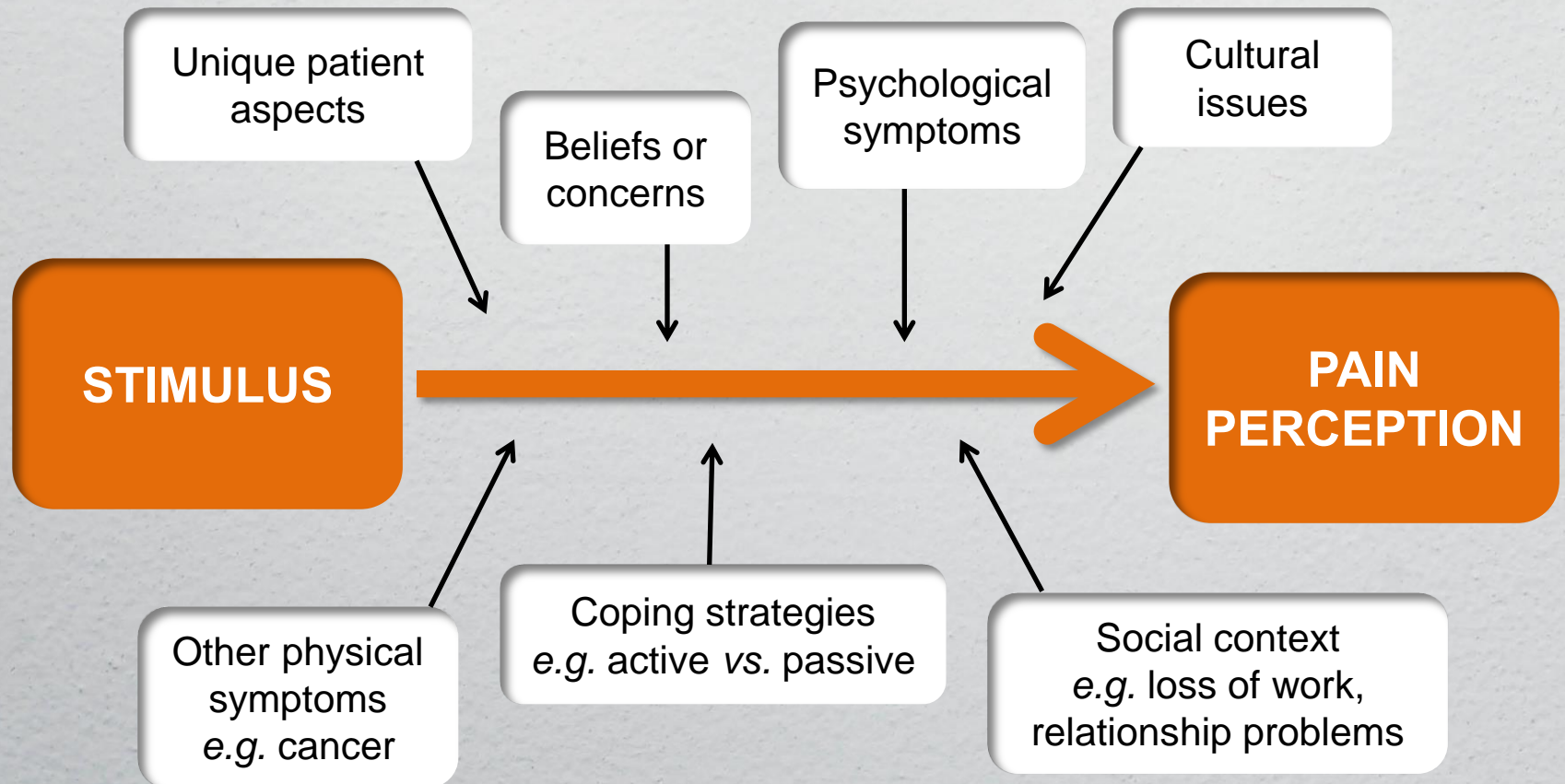
PART 2: MULTIMODAL PAIN MANAGEMENT

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CHRONIC PAIN MANAGEMENT

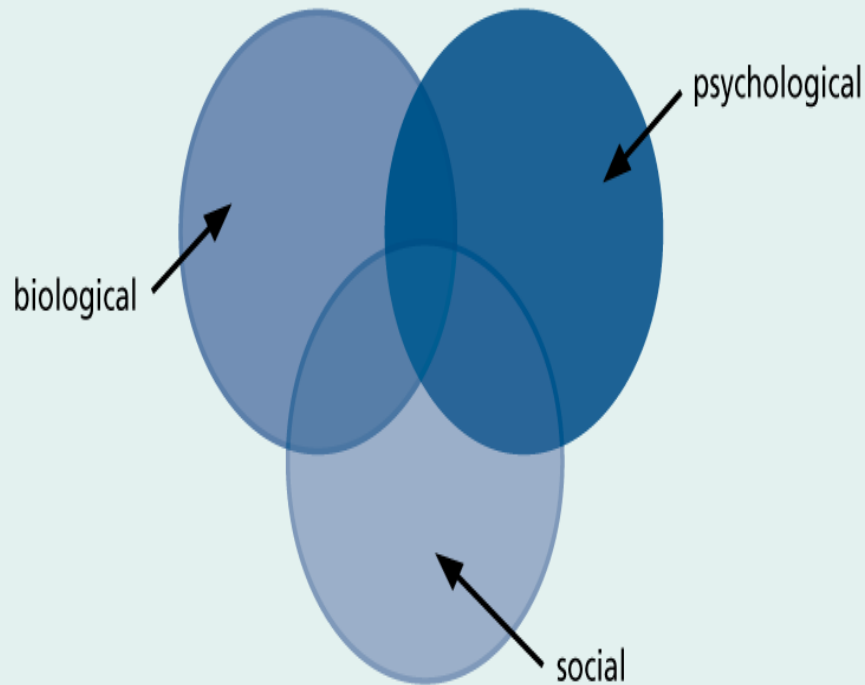
- Focusing on a single treatment modality may fail to address important aspects of the patient's pain experience¹
 - false beliefs and poor habits
 - unrealistic expectations
 - depression and anxiety
- A multimodal (team) approach is preferred,¹ involving:
 - non-pharmacological therapies
 - pharmacotherapy
 - referral to other healthcare professionals
 - procedural interventions

THE COMPLEXITY OF PAIN PERCEPTION (SOCIAL AND PSYCHOLOGICAL)¹



BIOPSYCHOSOCIAL APPROACH¹

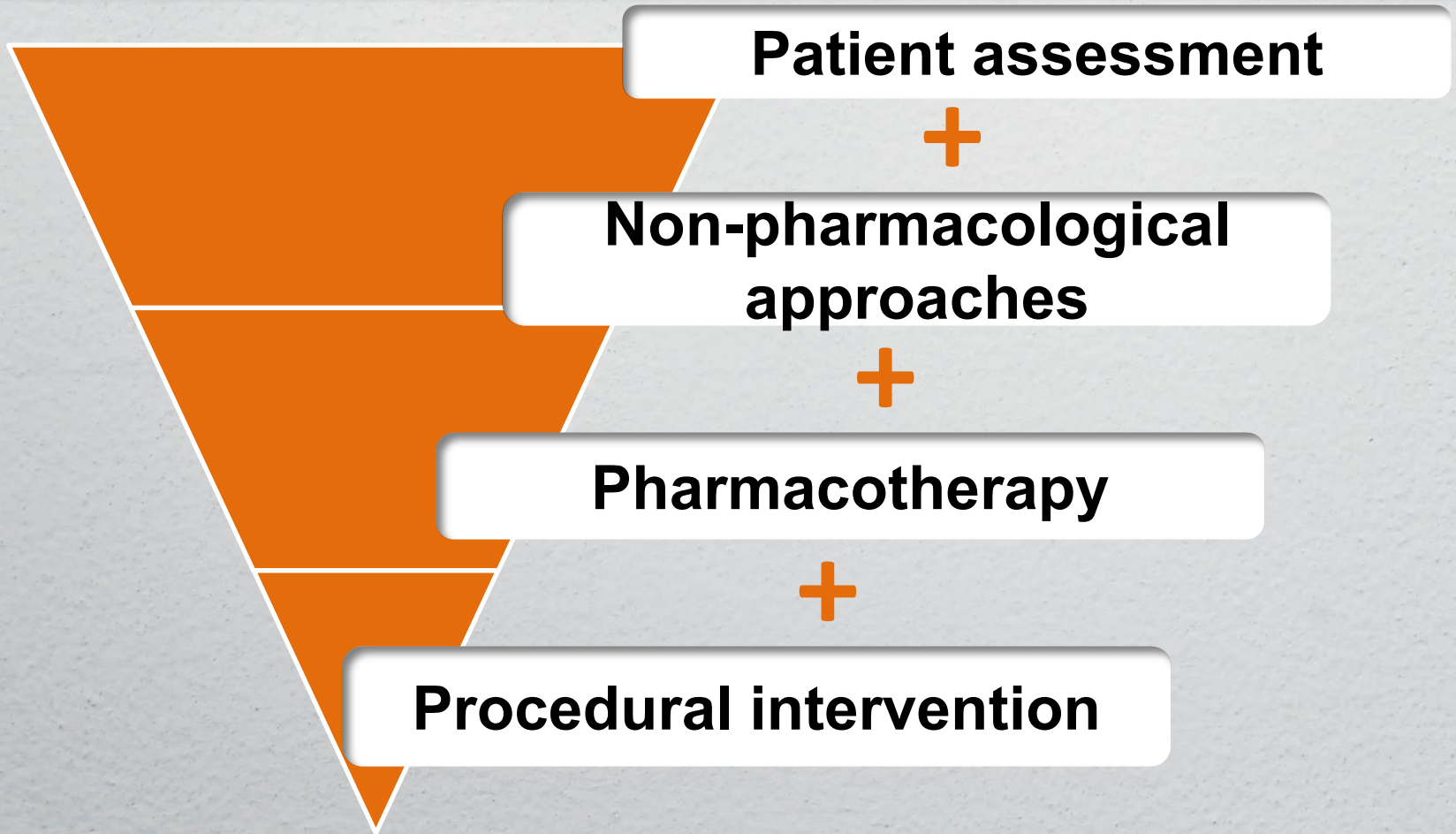
What is happening
to the body?
cause of pain



What is happening
to the person?
Impact on ADL's
Sleep
Mood
Self-esteem

What is happening in the person's world?
Impact on family, friends and work

MULTIMODAL PAIN MANAGEMENT¹



1. Analgesic Expert Group. Therapeutic Guidelines: Analgesic. Version 5. Melbourne: Therapeutic Guidelines Limited; 2007.

NON-PHARMACOLOGICAL APPROACHES

Physical techniques

- physiotherapy
- manual therapy
- hyperstimulation analgesia

Psychological techniques

- cognitive behavioural therapy
- relaxation/meditation
- hypnosis

Non-pharmacological approaches¹

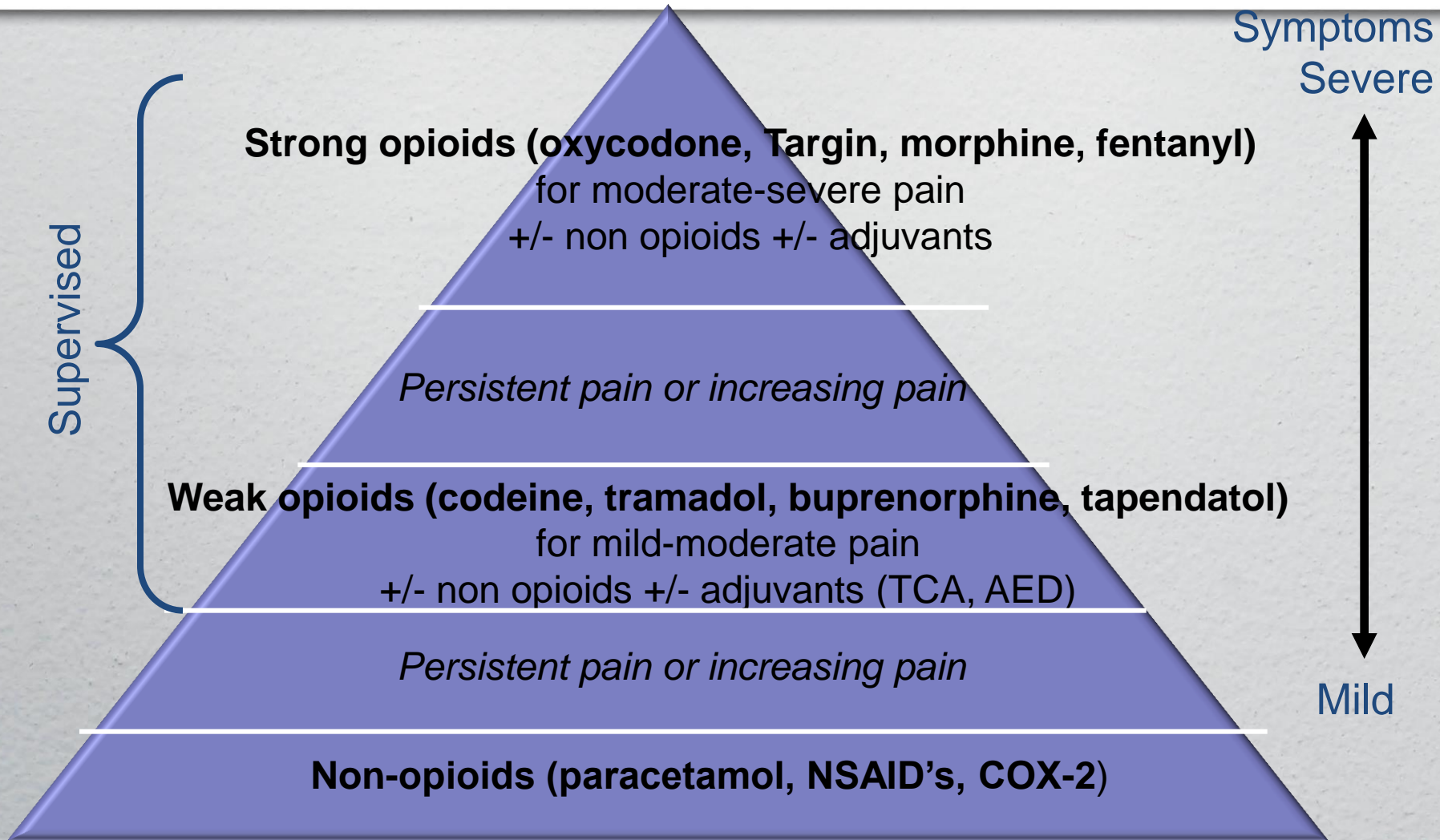
Occupational therapy

- task simplification
- pacing

Social interventions

- community support groups
- self-help groups
- work retraining/modification

WHO ANALGESIC LADDER (GENERALLY FOR NOCICEPTIVE PAIN)

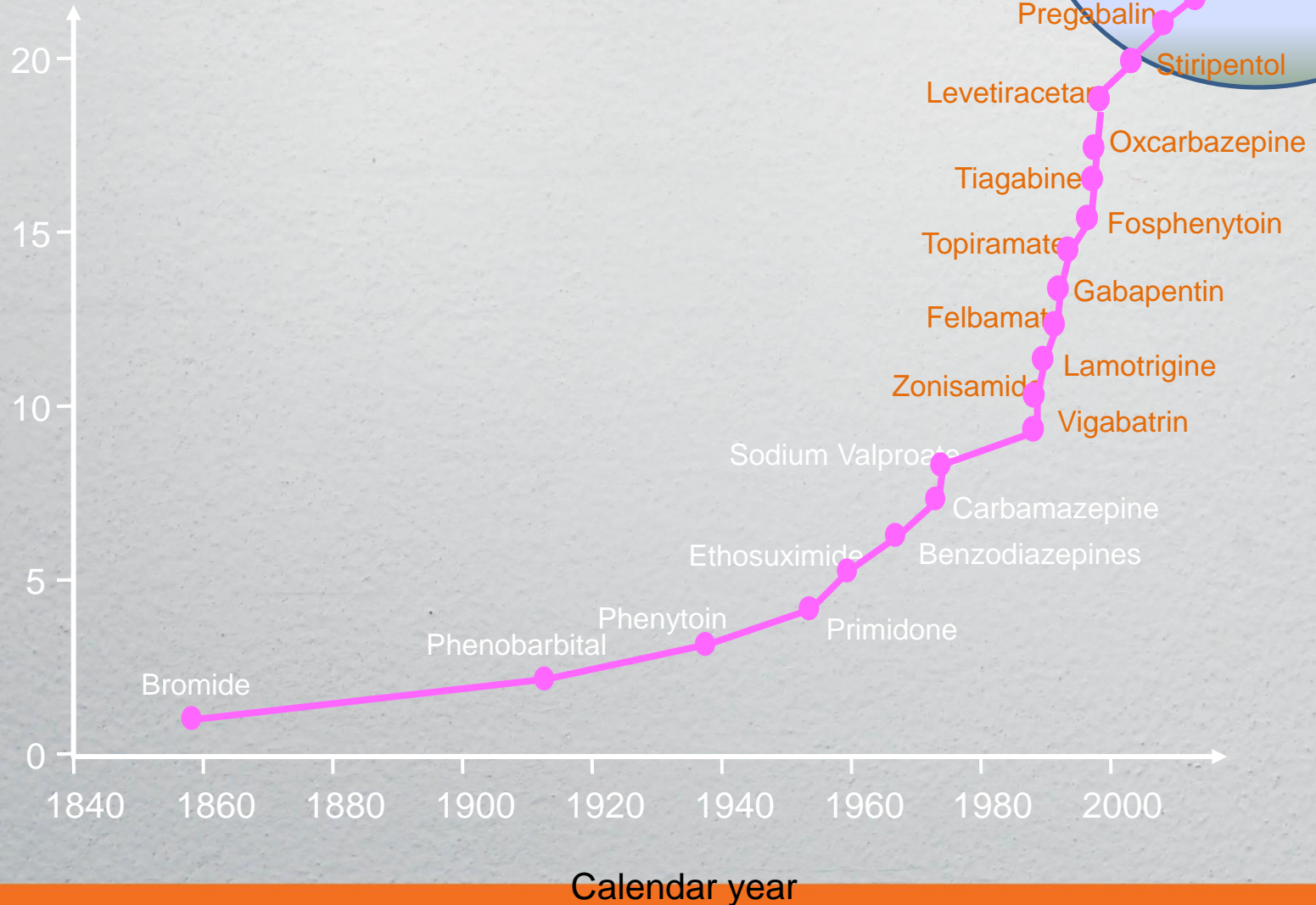


NEUROPATHIC PAIN THERAPY 2013

- Carbamazepine (NNT to obtain 50% relief - 1.7)
- Valproate, Phenytoin, Gabapentin, Lamotrigine, Topiramate, Oxcarbazepine
- Pregabalin, Levetiracetam, Tiagabine
- Lacosamide (Vimpat), Zonisamide
- Clonazepam
- Amitriptyline, Nortriptyline, Imipramine
- Duloxetine
- Opioids –Tramadol, Buprenorphine, Oxycodone (Targin), Tapendatol, Morphine, Fentanyl, Hydromorphone
- Baclofen, Mexilitene, Clonidine
- Capsaicin cream, Lignocaine 5% Dermal patch
- N-methyl-D-aspartate (NMDA) blockers – Ketamine, Memantine\
- Botulinum Toxin
- Vitamin B12

ANTI-CONVULSANTS 2013

Anti-convulsant drugs



PHARMACOTHERAPY

Initial Analgesic options	<ul style="list-style-type: none">• Paracetamol (1000mg qid)• Panadeine Forte (2 x 500mg/30mg qid)• Tramadol Quick Acting Capsules (50mg qid)
Pain lasting > 5 days	<ul style="list-style-type: none">• Tramadol SR (100-200 mg bd)• Duro-Tram XR (100-300mg nocte)• Tapendatol SR (50 – 200mg bd)• Buprenorphine patch (5-20 ug/hr weekly)• Oxycontin 10-20 mg bd or Targin 10/5 – 20/10 mg bd• Fentanyl patch 12-25 mcg every 3 days
Nocturnal Pain (TCA antidepressant)	<ul style="list-style-type: none">• Amitriptyline (10-25mg nocte) / Nortriptyline (10-25mg)• Doxepin (25-50mg nocte)• Clonazepam (0.25-0.5mg nocte)
Daytime Pain (Adjuvant AED)	<ul style="list-style-type: none">• Epilim (200-400 mg bd)• Pregabalin (25-300 mg bd)• Duloxetine (30-120 mg mane)• Gabapentin (100 – 600 mg tds)

| PROCEDURAL INTERVENTIONS¹

- Injection techniques
 - local anaesthetic nerve blocks for diagnostic, prognostic or therapeutic purposes
 - focus on improved movement as a measure of efficacy
- Spinal cord stimulation
- Intrathecal therapy
- Surgery
 - must have a clear idea of pain-causing mechanism, especially in low back pain

| PAIN CLINICS

- **Does not imply “Pain is not Real”**
 - When pain persists beyond healing or with no cause, it is often assumed patient is willingly aggravating the pain
This is rarely the case
 - Pain is a perception, which is filtered through the brain
- **Multidisciplinary treatment**
 - 1st pain clinic to include psychological component –1976
 - Cognitive components are crucial to the treatment
 - Reduce pain but also improve mood and decrease disability
 - Medical, physical, behavioural, emotional, vocational, social

PART 3: UNIVERSAL PRECAUTIONS WHEN PRESCRIBING OPIOIDS FOR THE MANAGEMENT OF MODERATE TO SEVERE CHRONIC PAIN

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OPIOIDS FOR THE TREATMENT OF MODERATE TO SEVERE CHRONIC PAIN

- Opioid therapy should be used as part of a multimodal pain management plan^{2,3}
 - an appropriate pain management plan must include non-pharmacological interventions
- Consider opioids after conservative pharmacological and non-pharmacological treatments have tried and failed^{1,2}
- Appropriate patient selection is the key to successful treatment of moderate to severe chronic pain with opioids^{1,3}

“In prescribing S8 opioids the aim is to reduce pain without causing distressing side-effects thus enabling functional restoration in the patient who is then able to achieve the outcomes and specific goals of treatment.”¹

– Government of South Australia: Guidelines for South Australian General Practitioners

1. Government of South Australia. Guidelines for South Australian General Practitioners: Opioid Prescription in Chronic Pain Conditions. Drug & Alcohol Services South Australia; 2008.

10 STEPS OF UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

- A 10-step approach for the assessment and management of chronic pain patients^{1,2}
- By applying the universal precautions:²
 - patient care is improved
 - stigma associated with opioids is reduced
 - overall risk is assessed
- May also assist in the identification and interpretation of aberrant behaviour and diagnosis of underlying addictive disorder (where relevant)²

10 STEPS OF UNIVERSAL PRECAUTIONS IN PAIN MEDICINE¹



1. Gourlay DL *et al.* Pain Med 2005;6:107–12.

UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

STEP 1: APPROPRIATE DIAGNOSIS



- HISTORY EXAMINATION
- Is there a treatable cause?¹
 - base diagnosis on evaluations and review of patient records²
- Does the patient have any comorbid conditions?¹
 - substance abuse?
 - psychiatric illness?
- Prescription shopping info service of Medicare prescription program

DETERMINING UNDERLYING CAUSES OF PAIN

- ‘Red flags’ are clinical indicators of possible serious underlying conditions requiring further medical intervention (designed for use in acute back pain)¹

Possible fracture	Possible tumour or infection	Possible significant neurological deficit
From history		
<ul style="list-style-type: none">• Major trauma• Minor trauma in elderly or osteoporotic	<ul style="list-style-type: none">• Age >50 or <20 years• History of cancer• Constitutional symptoms• IV drug use• Immunosuppression• Pain worsening at night/when supine	<ul style="list-style-type: none">• Severe or progressive sensory alteration or weakness• Bladder or bowel dysfunction
From physical examination		
		<ul style="list-style-type: none">• Evidence of neurological deficit

1. Hunter Integrated Pain Service. Pain Matters: Red and Yellow Flags. Medical Practice Guidelines; updated Nov 2005.

UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

STEP 2: PSYCHOLOGICAL & RISK ASSESSMENT



- Conduct a comprehensive biopsychosocial assessment
- What is the patient's past and current, personal and family history of substance and alcohol abuse?¹
 - do any psychological factors indicate a potential for abuse, addiction or diversion?
- All other conservative treatment options including non-pharmacological and adjuvant treatments must have been tried and have failed²

| YELLOW FLAGS

- Psychosocial ‘yellow flags’
 - Initially designed to predict failure to return to work after back pain
- Now used to predict which patients will develop long-term disability and pain.^{1,2}
- Relate to:
 - belief that pain is harmful or severely disabling
 - fear-avoidance behaviour and reduced activity
 - social withdrawal
 - expectation that passive treatments rather than active participation will help

PSYCHOLOGICAL ASSESSMENT TOOLS ¹⁻³

- Psychological assessment tools complement your clinical assessment of the patient, and may include:
 - mood screening scales (e.g. K-10, GDS, CES-D, DASS)^{1,2}
 - Örebro Musculoskeletal Screening Questionnaire¹
 - pain coping questionnaires³
- While DSM-IV criteria are not a screening tool, they may be useful for the diagnosis of psychological disorders²

Tools can be used for both the initial and ongoing assessments.

1. Hunter Integrated Pain Service. Assessment Tools [accessed 22 Aug 2012]. Available from: http://www.hnehealth.nsw.gov.au/pain/health_professionals/primary_care_resources/assessment/assessment_tools. 2. McDowell I. Measuring Health: A Guide to Rating Scales and Questionnaires, 3rd ed. Oxford University Press: New York, NY; 2006. 3. Ballantyne JC *et al.* eds. Coping with pain. International Association for the Study of Pain 2009;17(5):1–6.

OPIOID RISK ASSESSMENT TOOL (ORT)¹⁻²

Factor	Males	Females
Family history of substance abuse		
- Alcohol	<input type="checkbox"/> 3 points	<input type="checkbox"/> 1 point
- Illicit drugs	<input type="checkbox"/> 3 points	<input type="checkbox"/> 2 points
- Prescription drugs	<input type="checkbox"/> 4 points	<input type="checkbox"/> 4 points
Personal history of substance abuse		
- Alcohol	<input type="checkbox"/> 3 points	<input type="checkbox"/> 3 points
- Illicit drugs	<input type="checkbox"/> 4 points	<input type="checkbox"/> 4 points
- Prescription drugs	<input type="checkbox"/> 5 points	<input type="checkbox"/> 5 points
Aged between 16 and 45	<input type="checkbox"/> 1 point	<input type="checkbox"/> 1 point
History of preadolescent sexual abuse	<input type="checkbox"/> 0 points	<input type="checkbox"/> 3 points
Psychiatric disease		
- Attention deficit disorder, obsessive-compulsive disorder, bipolar disorder, schizophrenia	<input type="checkbox"/> 2 points	<input type="checkbox"/> 2 points
Depression	<input type="checkbox"/> 1 point	<input type="checkbox"/> 1 point

**8+
HIGH
RISK**

**4-7
MODERATE
RISK**

**0-3
LOW
RISK**

UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

STEP 3: INFORMED CONSENT



- Discuss treatment plan including potential risks and benefits¹
- Explore specific issues of addiction, physical dependence and tolerance¹

EXAMPLES OF BENEFITS AND RISKS OF OPIOID THERAPY

Examples of benefits and risks of opioid therapy^{1,2}

Potential benefits

- Reduction in pain
- Improvements in pre-specified activities of daily living
- Increased performance of various pre-specified exercises

Potential risks

- Potential to develop tolerance, dependence and/or addiction
- Potential to develop side effects, including mental clouding and sedation, constipation, nausea and hormonal problems

UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

STEP 4: TREATMENT AGREEMENT



- Discuss expectations of both the patient and the practitioner¹
- Written treatment agreement for initiation, continuation and termination of treatment^{1,2}
- Not meeting the goals of therapy, or development of aberrant behaviours, are grounds for discontinuing therapy³

DOCTOR-PATIENT AGREEMENT¹

CONSENT FOR USE OF OPIOIDS IN MODERATE TO SEVERE CHRONIC PAIN ■ DOCTOR - PATIENT TREATMENT AGREEMENT

This agreement aims to provide you with information about opioid therapy and to seek your approval about the way in which the medication will be used.

POTENTIAL BENEFITS

Opioids (morphine-like pain medicines) are used as part of a treatment plan rather than as stand-alone therapy. Potential benefits encompass both reduction in pain and improvement in function. Specific goals of therapy are:

a. Reduction in my average level of pain by ____%. At present my pain score is:

i. ____ at rest

ii. ____ on exertion

b. Improvement in the following activities of daily living

i. _____

ii. _____

iii. _____

c. Increased performance of the following exercises

i. _____

ii. _____

d. Other

i. _____

ii. _____

POTENTIAL PROBLEMS

1. Although medical studies show that opioid medication can reduce moderate to severe chronic pain in the short term, there are limited high-quality studies looking at longer term treatment. Further studies are needed.

2. It is possible that you may get initial benefit that wears off over time. This is called tolerance. Sometimes switching to an alternative opioid may help. Other pain management strategies also need to be considered.

3. Dependence and addiction can be problems. All patients on longer-term opioids become physically dependent, meaning that withdrawal symptoms occur if therapy is stopped abruptly. Addictive behaviour occurs in some patients and may be minimised by appropriate patient selection.

4. Side effects may include mental clouding and sedation, constipation, nausea, itch, sweating, dry mouth and hormonal problems such as weight gain and sexual dysfunction. Sedation is more troublesome if opioids are combined with other drugs such as alcohol and benzodiazepines.

5. Lack of alertness may affect driving ability, especially in the early stages after commencement of therapy or dose escalation. If your ability is impaired you should not drive.

6. Babies born to women on opioid therapy may require treatment for opioid withdrawal.

PRACTICAL ISSUES

1. One doctor only is to be responsible for prescribing your opioid medication at any one time. Arrangements can be made for a deputy prescriber to cover medical absences.

2. An initial opioid trial of 4-6 weeks is undertaken to assess your response before a decision is made on whether or not to continue with therapy for a time-limited period.¹ The decision will involve weighing up benefits and side effects.

3. The dose may be adjusted frequently during the trial period. If you progress beyond the trial period you will need to be reviewed by your doctor on a monthly basis.

4. Your doctor may need to obtain authority from a State Health Authority and/or Medicare Australia to cover your prescription beyond the trial period.

5. If your doctor becomes aware of behaviours suggestive of drug addiction then he/she will consider tapering and ceasing your opioid medication. Behaviours suggestive of addiction include giving your medication to others, use of your medication in a non-prescribed way, excessive use of other medications (including alcohol), repeated "loss" of medication, doctor shopping, worsening function at home or at work and frequent complaints about the need for a higher dose.

Adapted from Hunter Integrated Pain Service. Opioid use in persistent pain, April 2012 [accessed 2 April 2012]. Available from: http://www.hnhealth.nsw.gov.au/_data/assets/pdf_file/0001/79039/opioid_use_April_2012.pdf. Reference: 1. Gracoth RJ, Goucke CR. The use of oral opioids in patients with chronic non-cancer pain. Management strategies. Med J Aust 1997;167:30-34.

Potential benefits

Set expectations through treatment goals

Potential problems/risks

Practical issues

Outline prescribing rules and expectations
e.g. duration of treatment

Signed agreement

1. Hunter Integrated Pain Service, Opioid use in persistent pain, April 2012

TREATMENT GOALS

- Specific goals of opioid treatment will vary depending on the patient's circumstances¹
- Treatment goals should be realistic and achievable, and address improvements in both pain and function¹
- Goals of opioid treatment should be documented prior to an opioid trial¹

Discussion point:

What are some functional goals you have helped to set for your opioid-treated patients?

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STEP 5: PAIN ASSESSMENT



- Pre-intervention (baseline) measurements to enable assessment of response to therapy^{1,2}

PAIN ASSESSMENT TOOLS

- Brief Pain Inventory (BPI)¹
 - assesses pain severity and degree of interference with function
- Pain scales²
 - numerical rating scale (NRS), verbal rating scale (VRS), visual analogue scale (VAS)
- Abbey Pain Scale³
 - for patients with dementia and non-communicative patients

1. Breivik H *et al.* Br J Anaesth 2008;101:17–24. 2. Williamson A, Hoggart B. J Clin Nurs 2005;14:798–804. 3. Royal College of Physicians, British Geriatrics Society and British Pain Society. The assessment of pain in older people: National Guidelines. Concise guidance to good practice series, No 8. London: RCP, October 2007.

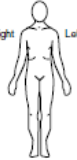
BRIEF PAIN INVENTORY SHORT FORM (BPI)

Patient name: _____ Date: _____

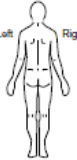
1) Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?
1. yes 2. no

2) On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.

Right Left



Left Right



3) Please rate your pain by circling the one number that best describes your pain at its WORST in the past 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No pain									Pain as bad as you can imagine	

4) Please rate your pain by circling the one number that best describes your pain at its LEAST in the past 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No pain									Pain as bad as you can imagine	

5) Please rate your pain by circling the one number that best describes your pain on AVERAGE.

0	1	2	3	4	5	6	7	8	9	10
No pain									Pain as bad as you can imagine	

6) Please rate your pain by circling the one number that tells how much pain you have RIGHT NOW.

0	1	2	3	4	5	6	7	8	9	10
No pain									Pain as bad as you can imagine	

7) What treatments or medications are you receiving for your pain?

8) In the past 24 hours, how much RELIEF have pain treatments or medications provided? Please circle the one percentage that most shows how much.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No relief									Complete relief	

9) Circle the one number that describes how, during the past 24 hours, PAIN HAS INTERFERED with your:

A. General Activity

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

B. Mood

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

C. Walking ability

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

D. Normal work (includes both work outside the home and housework)

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

E. Relations with other people

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

F. Sleep

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

G. Enjoyment of life

0	1	2	3	4	5	6	7	8	9	10
Does not interfere									Completely interferes	

Adapted from Cleeland CS, Pain Research Group, 1991 [accessed 24 Aug 2012]. Available from: <http://www.mdanderson.org/education-and-research/departments-programs-and-labels/departments-and-divisions/symptom-research/symptom-assessment-tools/brief-pain-inventory.html>. Reproduced with permission. Additional copies of the BPI Short Form can be obtained from Mundipharma or with permission from <http://www.mdanderson.org/BPI>.

Reference: 1. Cleeland CS, Ryan KM. Pain assessment: global use of the Brief Pain Inventory. Ann Acad Med Singapore. 1994;23(2):129-38. Mundipharma Pty Limited ABN 87 081 222 509, 50 Bridge St, Sydney, NSW 2000. Tel: 1800 188 000. Sautchi & Sautchi Health MUN02286 ORBIS AU-1276 Aug 2012.

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STEP 6: OPIOID TRIAL (LAST RESORT)



- Duration 4–6 weeks for first-time patients¹⁻⁴
- Start at a low dose and gradually titrate upwards if required³

An opioid trial will establish whether the patient's chronic moderate to severe pain is responsive to opioid therapy.³

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STEP 7: FOLLOW-UP ASSESSMENT



- Initially weekly during the trial period¹
- Assess pain and function using the BPI^{2,3}
- Decide whether to continue, modify dose, or withdraw opioid²

A valid outcome of an opioid trial is the decision not to proceed with treatment.³

1. Graziotti PJ, Goucke CR. Med J Aust 1997;167(1):30–4. 2. Gourlay DL *et al.* Pain Med 2005;6:107–12. 3. Hunter Integrated Pain Service. Opioid use in persistent pain, April 2012. 4. Government of South Australia. Guidelines for South Australian General Practitioners: Opioid Prescription in Chronic Pain Conditions. Drug & Alcohol Services South Australia; 2008.

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STEP 8: THE 6 As OF PAIN MEDICINE^{1–5}



- Analgesia
- Activity
- Affect
- Adverse effects
- Aberrant behaviours
- Accurate prescribing records

| THE 6 As OF PAIN MEDICINE^{1–5}

Activity	What progress has been made in the patient's functional goals?
Analgesia	How does the patient rate their average and worst pain over the last 24 hours? How much relief have pain medications provided?
Adverse effects	Has the patient experienced any adverse effects from medication?
Aberrant behaviour	Has the patient been taking medication as prescribed? Has the patient exhibited any signs of medication misuse/abuse?
Affect	Have there been any changes to the way the patient has been feeling? Is pain impacting on the patient's mood? Depressed? Anxious?
Accurate records	Document the initial evaluation and each follow-up, including current pain medication and any changes to the management plan.

1. Gourlay DL *et al.* Pain Med 2009;10:S115–23. 2. Gourlay DL *et al.* Pain Med 2005;6:107–12. 3. Hunter Integrated Pain Service. Opioid use in persistent pain, April 2012. 4. Jovey R. Practical pain management – optimizing outcomes, reducing risks. Personal communication, April 2010. 5. DeRemer CE *et al.* South Med J 2011;104(9):629–33.

OPIOID-RELATED SIDE EFFECTS^{1,2}

Common side effects	Other side effects
<ul style="list-style-type: none">• Dry mouth• Nausea and vomiting• Opioid-induced constipation (OIC)• Postural hypotension• Pruritus• Sedation	<ul style="list-style-type: none">• Hormonal effects• Hyperalgesia• Immunosuppression• Respiratory depression• Tolerance and addiction

ASSESSING BOWEL FUNCTION^{1,2}

- Bowel Function Index (BFI)
 - patient rates for the last 7 days (NRS 0–100)
 - ease of defaecation
 - feeling of incomplete evacuation
 - personal judgement of constipation
 - BFI = average of the 3 individual ratings

Normal BFI is ≤ 30 in OIC³

Belinda's BFI is 48

1. Rentz AM *et al.* J Med Econ 2009;12:371–83. 2. Rentz AM *et al.* Curr Med Res Opin 2011;27(1):35–44. 3. Schutter U *et al.* Curr Med Res Opin 2010;26:1377–87.

THE BOWEL FUNCTION INDEX (BFI)

A CLINICIAN-ADMINISTERED, PATIENT-REPORTED, 3-ITEM QUESTIONNAIRE^{1,2}


- The BFI should always be administered by a doctor or healthcare professional. It is not intended to be given to patients for completion on their own^{1,2}
- The BFI has been validated in chronic pain patients treated with opioid analgesics and was found to be a valid, reliable and responsive measure of opioid-induced constipation (OIC)^{1,2}

Patient name: _____ Date: _____

ITEM	PATIENT QUESTION	SCORE
1. EASE OF DEFAECATION during the last 7 days according to patient assessment	<p>ASK YOUR PATIENT: "During the last 7 days, how would you rate your ease of defaecation on a scale from 0 to 100, where 0 = easy or no difficulty and 100 = severe difficulty?"</p> <p>IF THE PATIENT NEEDS CLARIFICATION, ASK: "During the last 7 days, how easy or difficult was it to have a bowel movement on a scale from 0 to 100, where 0 = easy or no difficulty and 100 = severe difficulty?"</p>	<div style="border: 1px solid black; width: 50px; height: 30px; margin: 0 auto;"></div> /100 0 = easy / no difficulty 100 = severe difficulty
2. FEELING OF INCOMPLETE BOWEL EVACUATION during the last 7 days according to patient assessment	<p>ASK YOUR PATIENT: "During the last 7 days, how would you rate your feeling of incomplete bowel evacuation on a scale from 0 to 100, where 0 = no feeling of incomplete evacuation and 100 = a very strong feeling of incomplete evacuation?"</p> <p>IF THE PATIENT NEEDS CLARIFICATION, ASK: "During the last 7 days, how strongly did you feel that you did not empty your bowels completely? Please indicate how strong this feeling was on a scale from 0 to 100, where 0 = not at all and 100 = very strong."</p>	<div style="border: 1px solid black; width: 50px; height: 30px; margin: 0 auto;"></div> /100 0 = not at all 100 = very strong
3. PERSONAL JUDGEMENT REGARDING CONSTIPATION during the last 7 days according to patient assessment	<p>ASK YOUR PATIENT: "During the last 7 days, how would you rate your constipation on a scale from 0 to 100, where 0 = not at all and 100 = very strong?"</p> <p>IF THE PATIENT NEEDS CLARIFICATION, ASK: "During the last 7 days, how would you rate how constipated you felt on a scale from 0 to 100, where 0 = not at all and 100 = very strong?"</p>	<div style="border: 1px solid black; width: 50px; height: 30px; margin: 0 auto;"></div> /100 0 = not at all 100 = very strong
BFI	<p>Calculate the BFI by finding the average of scores for items 1 to 3</p> <p>BFI = <div style="display: inline-block; border: 1px solid black; width: 30px; height: 20px; margin: 0 5px;"></div> + <div style="display: inline-block; border: 1px solid black; width: 30px; height: 20px; margin: 0 5px;"></div> + <div style="display: inline-block; border: 1px solid black; width: 30px; height: 20px; margin: 0 5px;"></div> = <div style="display: inline-block; border: 1px solid black; width: 30px; height: 20px; margin: 0 5px;"></div></p> <p style="text-align: center;">3</p>	<div style="border: 1px solid black; width: 50px; height: 30px; margin: 0 auto;"></div> /100 ≤ 30 = normal bowel function ³

¹BFI total score: The BFI measures opioid-induced constipation with a BFI of ≤ 30 indicating normal bowel function^{3,4}
²Changes in BFI: A change of ≥ 12 points indicates a clinically meaningful change in bowel function³

References: 1. Rentz AM *et al.* Validation of the Bowel Function Index to detect clinically meaningful changes in opioid-induced constipation. J Med Econ 2009;12(4):371–83. 2. Rentz AM *et al.* Observational, non-interventive, multicenter study for validation of the Bowel Function Index for constipation in European countries. Curr Med Res Opin 2011;27(1):35–44. 3. Clumens ME, Mikus G. Combined oral and prolonged-release oxycodone and naloxone in opioid-induced bowel dysfunction: review of efficacy and safety data in the treatment of patients experiencing chronic pain. Expert Opin Pharmacother 2010;11(2):297–310. 4. Schutter U *et al.* Innovative pain therapy with a fixed combination of prolonged-release oxycodone/naloxone: a large observational study under conditions of daily practice. Curr Med Res Opin 2010;26(8):1377–87.

 BFI © Mundipharma Research, 2002. Australian Patent Number 2002/17807. Pending Patent Applications worldwide. Mundipharma Pty Limited ABN 87 081 222 500, 50 Bridge Street, Sydney, NSW 2000. Tel: 1800 188 009. Search & Seach Health MUN03233 CRIS AJ-1024 Aug 12.

OPIOID-INDUCED CONSTIPATION (OIC)

- Common, occurring in 40–95% of opioid-treated patients¹
- Clinical consequences include:²
 - decreased quality of life
 - limited ability to function (work and daily activities)
 - increased use of health resources
- Persistent and unlikely to improve over time¹
- Some patients decrease or cease opioid therapy (despite pain) to reduce constipation³

Discussion point:
How might you manage OIC in clinical practice?

LAXATIVES^{1–3}

Type	Mechanism of action	Side effects
Bulk laxatives <i>e.g. Metamucil (psyllium)</i>	Hydrophilic: water absorbing ↑ stool volume	Bloating, flatulence
Stimulant laxatives <i>e.g. Dulcolax (bisacodyl)</i>	↑ intestinal motility ↑ secretions into lumen	Abdominal pain
Osmotic laxatives <i>e.g. Movicol (macrogol), Duphalac (lactulose)</i>	Osmotic gradient Draws water into lumen to stimulate peristalsis	Bloating, nausea, abdominal pain
Stool softeners <i>e.g. Coloxyl (docusate sodium)</i>	Detergent Allows water to mix with stool to soften stool	May reduce fat-soluble vitamin absorption (<i>e.g.</i> liquid paraffin)
Enema	Reflux evacuation	Dehydration

1. Benyamin R, *et al.* Pain Phys 2008;11:S105–20. 2. Rossi S. Australian Medicines Handbook 2012. 3. Pappagallo M. Am J Surg 2001;182:11S–18S.

LIMITATIONS OF LAXATIVES IN OIC

- Laxatives can help reduce symptoms of constipation,¹ especially if the cause is multi-factorial
- OIC often persists as laxatives do not address the cause^{1,2}
 - lack of data to guide laxative selection^{1,3}
 - there are additional side effects and cost^{1,4}
 - compliance issues^{2,4,5}

Opioid antagonists can be used to prevent or treat OIC, which arises due to activation of opioid receptors in the gut.^{2,5}

TARGIN® TABLETS (APRIL 2011) **OXYCODONE + NALOXONE**

TARGIN® TABLETS 12-HOURLY CONTROLLED RELEASE¹

OXYCODONE

Opioid agonist with
central action¹



NALOXONE

Opioid antagonist that
acts locally in the gut^{1,2}

**TARGIN® TABLETS
EFFECTIVELY RELIEVE
MODERATE TO SEVERE
CHRONIC PAIN¹**

**TARGIN® TABLETS
HELP PREVENT OIC^{1,3}**

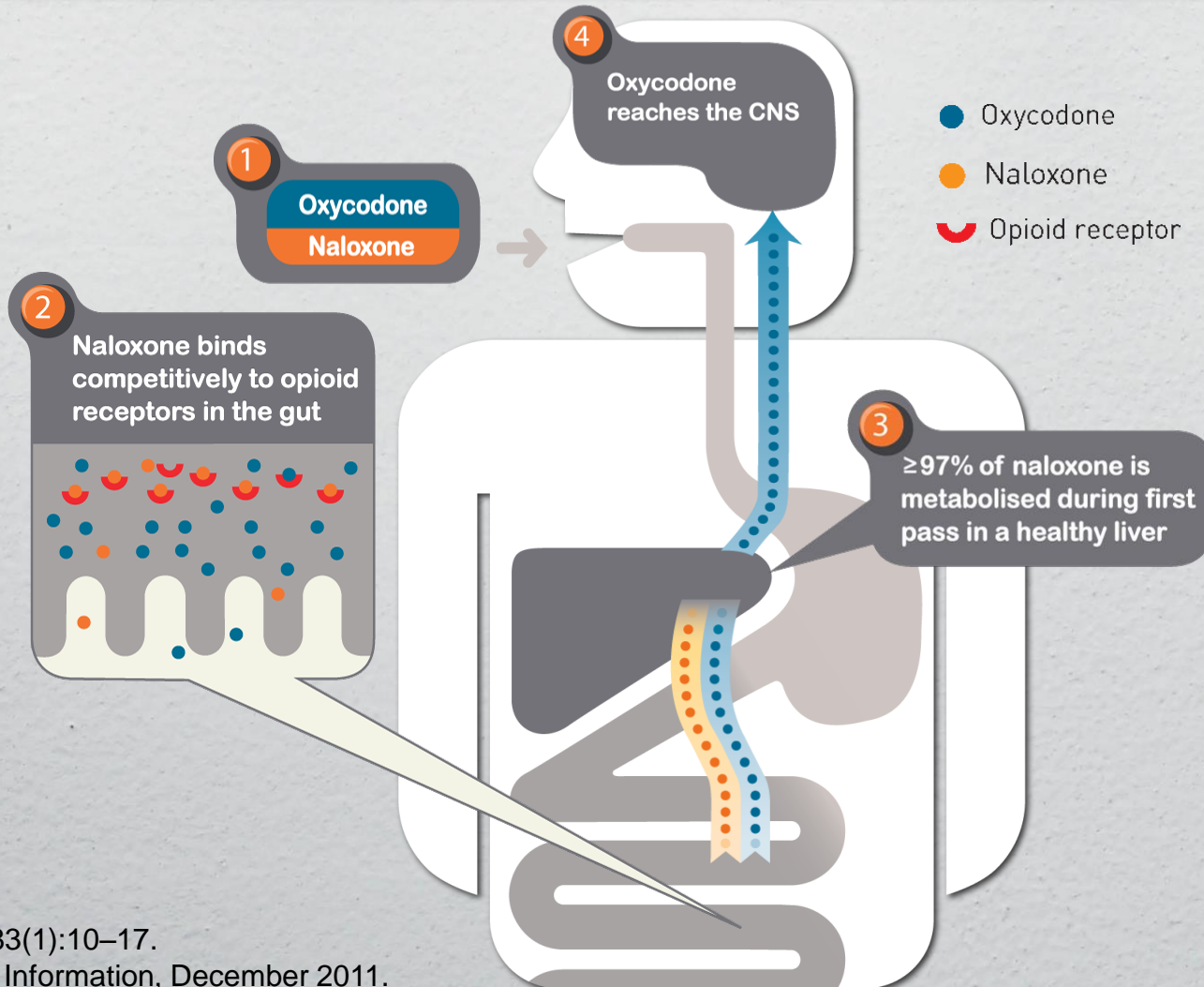
OXYCODONE/NALOXONE CONTROLLED RELEASE (CR) TABLETS^{1,2}

1. 12-hourly oral tablets deliver oxycodone CR / naloxone CR

2. Due to its high binding affinity, naloxone prevents or reverses the effects of oxycodone in the GI tract, reducing OIC

3. During first pass, at least 97% of naloxone is metabolised in the healthy liver, while up to 87% of oxycodone passes into circulation unchanged

4. Oxycodone exerts a central analgesic effect equivalent to oxycodone alone

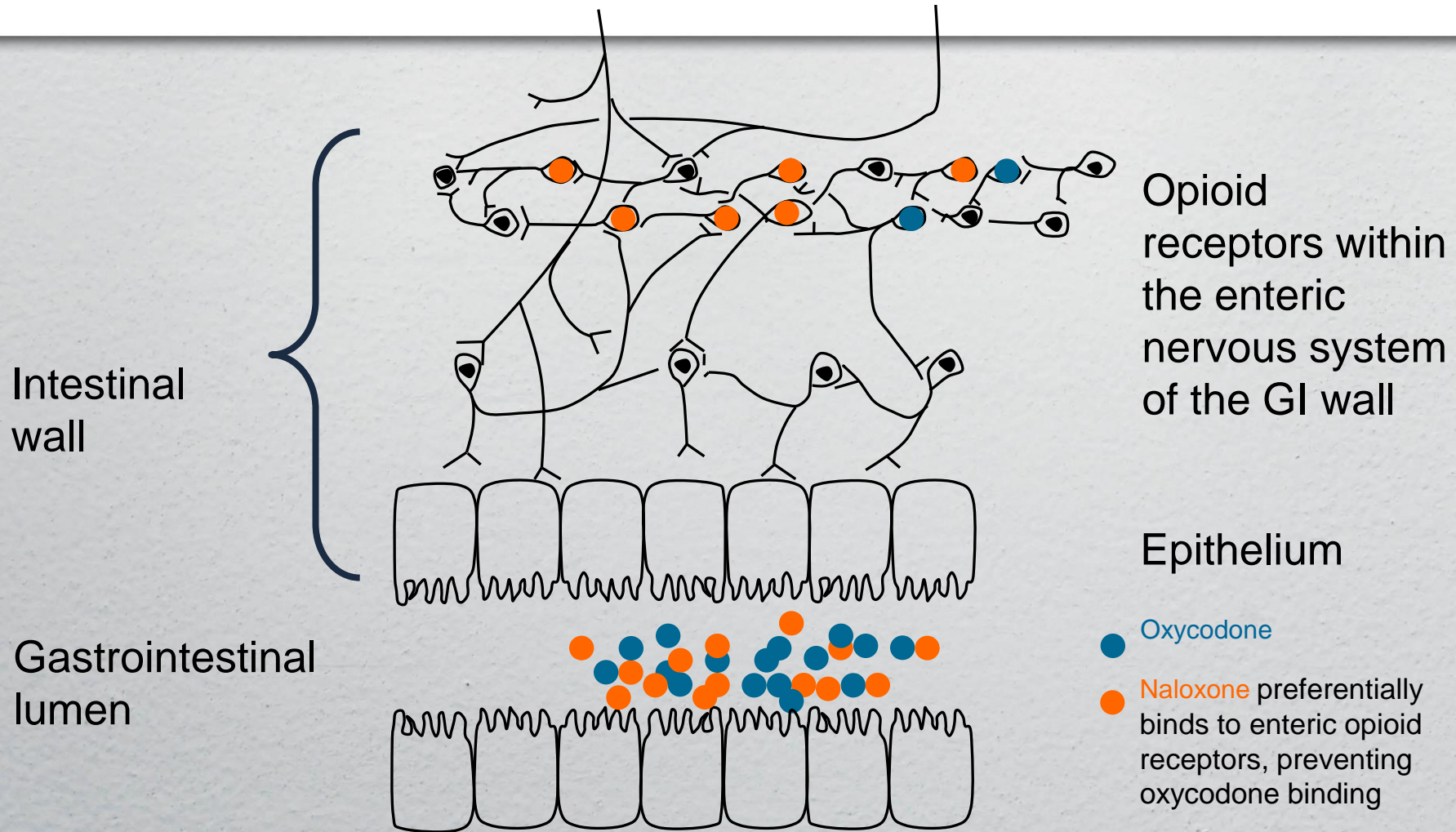


1. Reimer K *et al.* Pharmacology 2009;83(1):10–17.

2. Oxycodone/naloxone tablets Product Information, December 2011.

CNS=central nervous system; CR=controlled release; GI=gastrointestinal; OIC=opioid-induced constipation.

TARGIN AND THE GI WALL

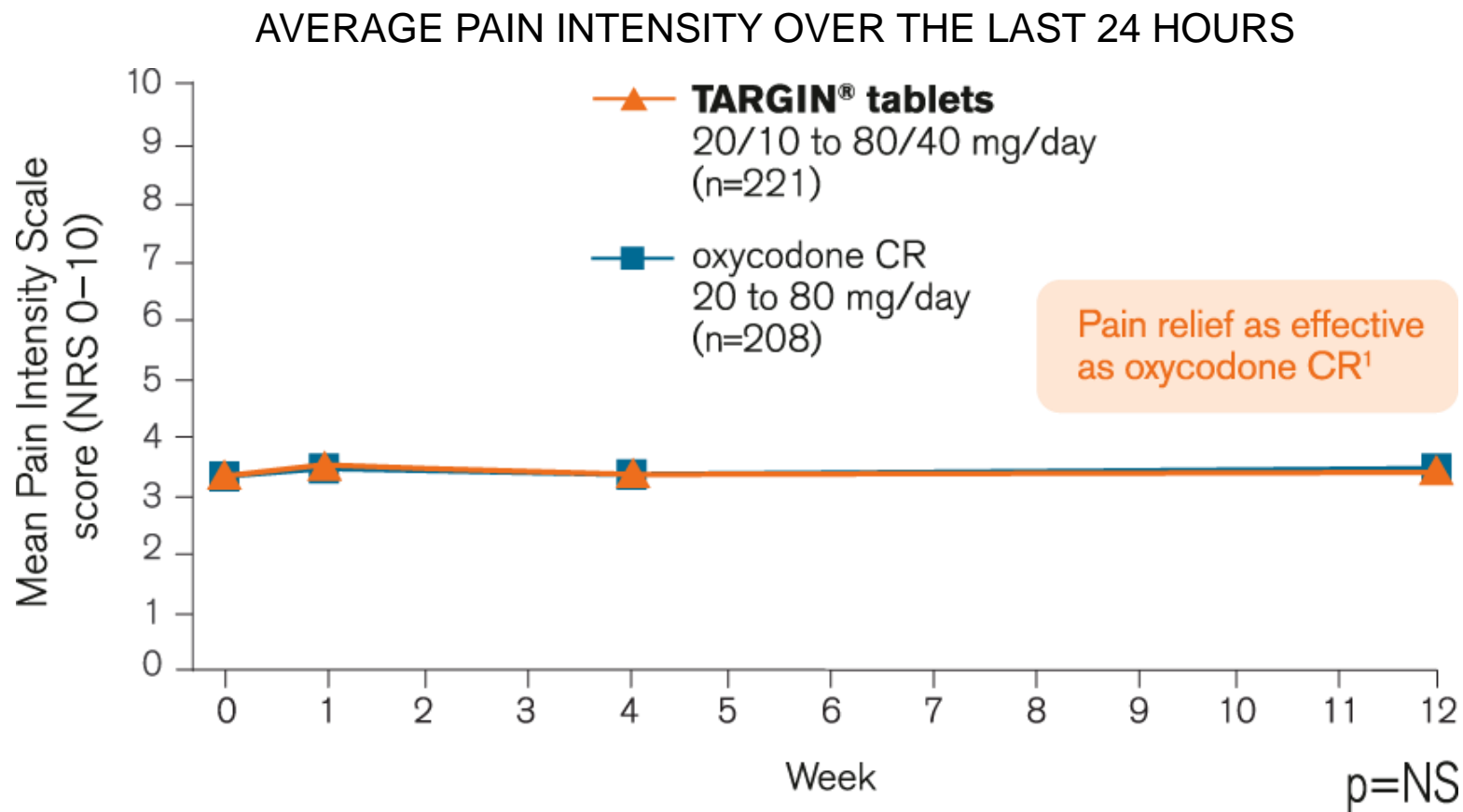


SIDE EFFECT PROFILE OF OXYCODONE / NALOXONE CR TABLETS

- Common side effects are consistent with other opioids¹
 - include dizziness, headache, nausea, vomiting, dry mouth, constipation, diarrhoea and pruritus
- GI tolerability
 - fewer bowel function disorders such as constipation compared with oxycodone CR alone^{2,3}
 - diarrhoea may be a possible side effect of naloxone, especially at the beginning of treatment, but tends to be transient¹

TARGIN® TABLETS

EFFECTIVE PAIN RELIEF OVER 12 WEEKS¹



- 86% of patients experienced pain associated with musculoskeletal & connective tissue disorders. 34% of patients reported neuropathic pain¹
- There was no statistically significant difference in mean daily use of rescue medication between the two groups¹

SWITCHING FROM OTHER OPIOIDS TO OXYCODONE / NALOXONE CR TABLETS

- When switching to oxycodone/naloxone CR tablets consider:
 - dose of previous opioid analgesic
 - Starting dose is 10/5 mg bd (renal and elderly 5/2.5mg bd)
 - a review (and possible reduction) of prior laxative regimen
 - setting patient expectations
 - possibility of transient diarrhoea
 - universal precautions in pain medicine

ABERRANT DRUG-RELATED BEHAVIOURS (ADRBs)

- ADRBs may include:^{1,2}
 - borrowing another patient's drugs
 - obtaining prescription drugs from non-medical/other medical sources
 - unsanctioned dose escalations
 - aggressive complaining about the need for higher doses
 - drug hoarding
 - requesting specific drugs
 - prescription forgery
 - recurring prescription losses
 - injection of substances prescribed for oral use
 - concurrent use of related illicit drugs

ABERRANT DRUG-RELATED BEHAVIOURS (ADRBs)

- ADRBs may be indicative of risk of addiction¹
- ADRBs may arise from a number of factors, including under-treatment of pain^{1–3}

“Now, even though iatrogenic opioid addiction rates are still largely unknown, it is generally recognized that problematic opioid seeking and addiction arise often enough during chronic treatment to be of considerable concern.”³

– Ballantyne JC & LaForge KS, 2007

UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

STEP 9: PERIODIC REVIEW



- If the patient's pain is opioid responsive, consider longer-term opioid therapy for 3–6 months with monthly reviews¹
- Review pain diagnosis and comorbid conditions^{2,3}
- Ensure the patient is willing to actively participate in all (including non-pharmacological) aspects of their pain management plan¹

UNIVERSAL PRECAUTIONS IN PAIN MEDICINE

STEP 10: DOCUMENTATION




- Careful and complete recording of the initial evaluation and each follow-up is in the best interest of both parties^{1,2}
- Medico-legally, documentation in the patient's medical record that pain is being followed over time is important evidence of the appropriateness of treatment³

DISCONTINUING OPIOID THERAPY

- The decision to discontinue opioid therapy may be made for a variety of reasons including:¹
 - successful therapeutic outcomes
 - unresponsive to opioid therapy
 - adverse effects
 - development of aberrant behaviours
 - development of a psychological issues
 - patient's choice
- Cessation of opioid therapy requires gradual dose reductions over time^{2–4}

1. Hunter Integrated Pain Service, Opioid use in persistent pain, April 2012. 2. Analgesic Expert Group. Therapeutic Guidelines: Analgesic. Version 5. Melbourne: Therapeutic Guidelines Limited; 2007. 3. Chou R *et al.* J Pain 2009;10(2):113–30. 4. Government of South Australia. Guidelines for South Australian General Practitioners: Opioid Prescription in Chronic Pain Conditions. Drug & Alcohol Services South Australia; 2008.



PART 4: CASE STUDIES

| **A/PROFESSOR ARUN AGGARWAL**
| **RPAH**
SYDNEY

| MRS BL

- 72 yo retiree
 - Helps care for her five grandchildren
- History of osteoarthritis of the hip
 - currently taking oxycodone CR
- Regularly attends hydrotherapy
- History of OIC
 - currently taking multiple laxatives



| PRESENTATION

- Presents for her regular review
- Maintaining her treatment goals
 - increased ability to perform routine day-to-day activities such as putting on her socks
 - increased sitting and standing tolerance
- Complains of abdominal pain and bloating, with recent onset of nausea
 - potential diagnosis?

Discussion point:

What further investigations would you perform to diagnose or exclude OIC?

PATHOGENESIS OF CHRONIC CONSTIPATION

PRIMARY CONSTIPATION^{1,2}

- Functional constipation (low fibre and fluid intake)^{1,3,4}
- Idiopathic (includes irritable bowel disease)^{1,2,4}

SECONDARY CONSTIPATION^{1,2}

Iatrogenic → opioids, Ca²⁺ channel blockers, anti-cholinergics, TCA's, antacids¹⁻³

Metabolic & endocrine disorders → diabetes, thyroid disease,¹⁻³

Psychological → depression²

Neurologic and myopathic disorder → Parkinson's disease, multiple sclerosis, stroke¹⁻³

Structural obstruction → colon cancer, stricture, anal fissures and stenosis¹⁻³

**How would you better manage
Belinda's OIC and moderate to
severe chronic pain?**

TARGIN® TABLETS

INITIATION and TITRATION



5/2.5 mg



10/5 mg



20/10 mg



40/20 mg

Opioid therapy should only be used as part of a multimodal pain management plan

USUAL STARTING DOSE

- Patients uncontrolled on weaker opioids



10/5 mg TARGIN®
tablet 12-hourly

- 12-hourly oral dosing
- TARGIN® tablets must be swallowed whole and **must not be broken, chewed or crushed**
- Titrate cautiously, to achieve pain relief and functional improvement, and to minimise the risk of adverse events

TARGIN® TABLETS

INITIATION and TITRATION

50% STARTING DOSE IN:¹

- Patients with mild hepatic impairment
Bil to 45, Alb to 28, INR 2.3
- Patients with renal impairment
Clcr <60mL/min
- Debilitated elderly patients



5/2.5 mg TARGIN®
tablet 12-hourly

MAXIMUM RECOMMENDED DOSE¹

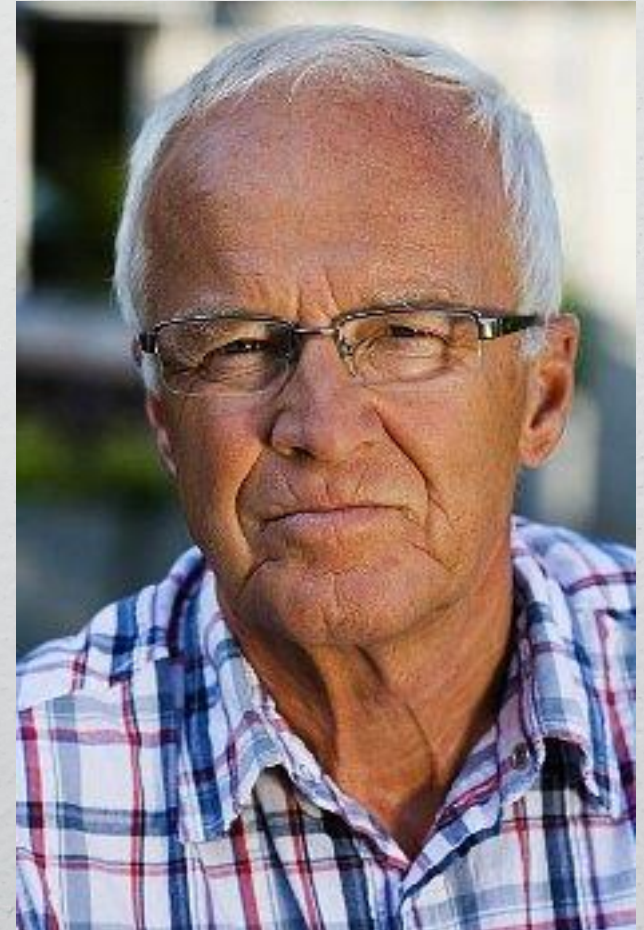


40/20 mg TARGIN®
tablet 12-hourly

- A maximum recommended dose exists due to limited exposure of patients receiving doses beyond 40/20 mg 12-hourly
- If longer-term treatment is anticipated, careful and regular assessment and monitoring is required to establish the clinical need for ongoing opioid treatment

| MR JR

- 76 yo carpenter,
 - now manager at carpentry firm
 - also likes working in garden
- History of right knee pain
- Currently on maximum dose paracetamol/codeine (30 mg)
 - NSAID for breakthrough pain
- Has regular physiotherapy
 - home-based exercise programme
 - heat packs



| PRESENTATION

- Complains of worsening knee pain
 - pain assessment NRS **8/10** = moderate to severe pain
- Complains of impaired daily function
 - unable to work a full day due to knee pain
 - trouble with light household and gardening tasks
 - reduced tolerance for standing
 - disturbed sleep
- Experiences dyspepsia due to NSAID use

| WHAT IS YOUR TREATMENT PLAN FOR JOHN?

- **John may be a candidate for knee surgery.**
- **How would you manage John's moderate to severe chronic pain between now and surgery?**

| OPIOIDS¹

Discussion point:

Which opioid would you trial for John's moderate to severe chronic pain and why?

- Buprenorphine 7-day patch (Norspan)
- Tramadol / Tapendatol SR
- Oxycodone/naloxone CR (Targin)
- Oxycodone CR (Oxycontin)
- Fentanyl 3-day patch
- Morphine CR (MS Contin)
- Hydromorphone (modified release)

| **PROGRESS**

- Commence **Buprenorphine 5 mcg/hr weekly patch**
- Pain improved from **NRS 8/10 to 4/10**
 - Ceased regular paracetamol/codeine, but needs paracetamol 8/day
 - Able to work all day, without being limited by pain
 - Stand for as long as needed
 - Sleeping well at night
- Review in 4 weeks, patch **increased 10 mcg/hr weekly**
- Pain **improved to 2/10**
 - No additional analgesia required and functioning very well

| PROGRESS

- Buprenorphine patch **5 mcg/hr weekly**:
 - Background pain **6/10 to 4-5/10**
 - Sleep has improved, not waking in pain
 - No change on pain during walking (rating 9/10)
 - No adverse effects reported
- Buprenorphine patch dose increased to **10 mcg/hr**
- Pain relief improved
 - Background pain reduced further to **3/10**
 - Incident pain improved with worst pain 5/10
 - Walking tolerance increased to 30 minutes
 - Buprenorphine is well tolerated
- **Continue buprenorphine patch at 10 mcg/h**

Mrs MW


- 54 yo
- 8 year history of lower lumbar back pain
- Constant sharp shooting pain down right leg 9/10
- CT Lumbar spine – severe degenerative facet joint disease and moderate disc bulge L4/5
- **Amitriptyline 10 mg nocte**
 - Improved sharp pain
- Ongoing dull ache **5-6/10**
- Add **Tramadol SR 100 mg mane**
 - Improved pain and able to return to work

Mrs MW

- Constant dull ache 5/10
- Increased Tramadol to 200 mg bd
- **Bone Scan**
 - Moderate facet joint uptake at multiple levels
- Started **Oxycontin 10 mg bd**
 - Excessive daytime drowsiness
 - 5 mg bd improved pain from 8/10 to 5/10
 - Drowsy during the day
 - “Sick of taking pills”

Mrs MW

- **Fentanyl patch**
 - 12 – 25 – 37 mcg every 3 days but lasts only 2 days
 - Drowsy throughout the day
 - Constant pain - dull ache - **5/10**
- **Constipation**
 - **Opening her bowels about once a week**
 - Drinking 2 litres of water a day
 - Tony Ferguson high fibre diet
- **Targin 10/5 mg bd increasing to 20/10 mg bd**
 - Pain manageable and tolerable **2/10**
 - Less drowsy during the day
 - Less constipation – bowels opening **2-3 times a week**



PART 5: SUMMARY



A/PROFESSOR ARUN AGGARWAL



**RPAH
SYDNEY**

| SUMMARY

- Chronic pain is a complex condition affected by psychological, environmental, social and physiological factors¹
 - Chronic pain should be managed using a multimodal approach, including pharmacological and non-pharmacological treatments¹
- Opioids may be considered for the treatment of well-selected patients with chronic moderate to severe pain when all other conservative therapies have been tried and have failed^{1,2}
- The 10 steps of universal precautions in pain medicine should be implemented when prescribing opioids^{3–5}

1. Analgesic Expert Group. Therapeutic Guidelines: Analgesic. Version 5. Melbourne: Therapeutic Guidelines Limited; 2007. 2. Cohen ML, Wodak AD. Medicine Today 2010;11:10–18. 3. Gourlay DL *et al.* Pain Med 2005;6:107–12. 4. Gourlay DL *et al.* Pain Med 2009;10:S115–23. 5. Government of South Australia. Guidelines for South Australian General Practitioners: Opioid Prescription in Chronic Pain Conditions. Drug & Alcohol Services South Australia; 2008.

| SUMMARY

- Neuropathic pain is common, under-reported, under-diagnosed and under-treated
- A simple, stepwise approach to diagnosis may help differentiate between neuropathic and nociceptive pain:
 - Listen to the patient's pain description
 - Locate a potential nerve lesion/dysfunction, if possible
 - Look for neurological symptoms, such as sensory deficits

| SUMMARY

- Neuropathic pain responds poorly to conventional analgesia
 - First-line treatments include:
 - TCAs (amitriptyline)
 - Alpha 2-delta ligands (pregabalin)
 - SNRIs (duloxetine)
 - Second-line treatments include:
 - Opioids
- Constant nociceptive pain should be treated by ***regular long acting medication***, NOT by short acting drugs given PRN
 - PRN = pain relief never

SUMMARY



- Opioids should be administered as part of a multimodal management plan, including non-pharmacological approaches^{1,2}
- The goal of opioid therapy is to reduce pain with improvements in function and minimise side effects³
- Opioids may be used for the treatment of moderate to severe chronic pain in well-selected patients when all other conservative pharmacological and non-pharmacological therapies have been tried and have failed.^{2,5,6}

1. Hunter Integrated Pain Service, Opioid use in persistent pain, April 2012. 2. Cohen ML, Wodak AD. *Medicine Today* 2010;11:10–8. 3. Government of South Australia. *Guidelines for South Australian General Practitioners: Opioid Prescription in Chronic Pain Conditions*. Drug & Alcohol Services South Australia; 2008. 4. Gourlay DL *et al.* *Pain Med* 2005;6:107–12. 5. Gourlay DL *et al.* *Pain Med* 2009;10:S115–23. 6. Analgesic Expert Group. *Therapeutic Guidelines: Analgesic*. Version 5. Melbourne: Therapeutic Guidelines Limited; 2007.



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